

**REMARKS**

Claims 1 and 3- 30 are pending.

**I. Claim Amendments**

Claim 2 has been cancelled and its features added to Claim 1. Claim 29 is withdrawn. If its base claim is allowed it is respectfully requested it be rejoined.

**II. 35 USC § 103**

Claims 1-28 and 30 stand rejected under 35 USC § 103(a) as allegedly being unpatentable over EP 799900 in view of WO 95/26420 or Baumann et al. (U.S. Patent No. 5,624,632). The Office Action asserts EP '900 teaches each feature of the claims, except for the addition of Sc, for which purpose WO '420 and Baumann et al. are cited.

**A. WO '420**

WO '420 discloses aluminium alloy products with one or more alloying elements selected from the group Sc, Zr, Ce and V in defined ranges. The alloy products are said to enable stronger welds. There is no mention or hint that the addition of Sc, itself, may have a positive influence on the exfoliation corrosion resistance of the alloy product, which is one of the most important features of the present invention (see description on page 4, line 12-22).

The disclosure of WO '420 does not provide the necessary motivation towards the presently recited ranges. Claim 1 of WO'420 (specifically cited by the Office Action) indeed suggests that Sc in a range of 0.15-0.60 may be added to aluminium alloys. Alternatively V, Zr or Ce could be added. According to WO '420 claim 1 the aluminium alloy comprises one or more elements Mg, Be, Mn, Cr, Ti, Cu, or Mo in total up to 7.20%. There is no disclosure for the presence of Zinc in any range.

The examples supporting the disclosed alloy product of WO'420 are distinguishable from the present invention:

Table 1.1 on page 11, second column reading "le plus proche a l'alliage propose" (= alloy closest to the proposed alloy) does not contain any Sc. The third column listing the proposed alloy according to the WO '420 invention has a Mg-content higher than the

presently claimed alloy, has a Mn-content of 0.05-0.30 which far removed from the presently recited range and most importantly it does not contain any Zn whatsoever.

WO'420, Table 1.2 on page 12, second column reading "le plus proche a l'alliage propose" does not contain any Sc, and has Mg and Mn-contents far removed from our alloy. The third column listing the proposed alloy according to the invention disclosed in WO '420 has a Mg-content lower than our alloy, has a Mn-content of 0.05-0.40 which far removed from the presently recited range, and most importantly it does not contain any Zn whatsoever.

WO'420, Table 1.3 on page 13, second column reading "le plus proche a l'alliage propose" does not contain any Sc, and has Mg far removed from the presently recited alloy and further more it contains 4.4% of Cu. The third column listing the proposed alloy according to the invention disclosed in WO '420 has a Mg-content lower than the presently claimed alloy, has a Cu-content of 2.8-4.5% and a Mn-content of 0.05-0.50 which is far removed from the presently recited range. And most importantly it does not contain Zn.

Although each of WO'420 Tables 1.1 and 1.2 detail alloys containing zinc or scandium, none of the alloys disclosed in these tables have both zinc and scandium. In fact, the alloys described in the second columns of these tables, i.e., the prior art alloys, contain zinc, but in the third columns of each of the tables, the zinc has been eliminated completely from the alloy in favor of elements such as scandium. Thus, WO '420 actually teaches away from adding scandium to an alloy which contains, e.g., zinc.

Moreover, the alloys disclosed in Table 2 on page 15, Table 5 on page 16, Table 7 on page 17, Table 9 on page 18 disclose alloys far removed from the presently claimed ranges, and all disclosed alloys are devoid of any zinc.

The skilled person when starting from EP'900 with an Al-Mg-Mn-alloy having Zn in a range of 0.4-1.5% and faced with the problem of providing an alloy product which is weldable and has improved resistance against exfoliation corrosion, in particular when brought in an sensitized condition such as to allow temperatures of use above 80°C, will find no hint or suggestion in WO '420 that Sc should be added in the claimed range to arrive at the product according to the present invention.

The combination of the teaching of EP '900 and WO '420, provided there would be an allowable reason for the combination, would lead the skilled person towards an alloy

product having no zinc in view of the teaching of WO'420. Thus the combination of these two prior art documents would lead to a different aluminium alloy product.

Reconsideration is respectfully requested.

B. Baumann et al.

Baumann et al. discloses an aluminium alloy product for use as a damage tolerant product for aerospace applications (see abstract, and column 1, line 36-39). There is no disclosure in this reference that the alloy product disclosed is subjected to or can be subjected to a welding operation. And it is an essential feature of the disclosed alloy product that the composition is substantially zinc-free and lithium-free (see, e.g., claim 1). What is meant by "substantially free" is mentioned in column 2, lines 19-24.

The combination of the teaching of EP'900 and Baumann et al. , provided there would be an allowable reason for this combination, would lead the skilled person towards an alloy product having substantially no zinc in view of the teaching of Baumann et al. Thus, the combination of these two prior art documents would lead to a different aluminium alloy product.

Reconsideration is respectfully requested.

III. Double Patenting

Claims 1-28 and 31 stand rejected under the judicially created doctrine of obvious-type double patenting as being unpatentable over claims 1-24 of U.S. Patent No. 6,342,113, in view of WO '420 or Baumann et al.

Claims 1-28 and 31 stand rejected under the judicially created doctrine of obvious-type double patenting as being unpatentable over claims 2 and 13 of U.S. Patent No. 6,416,884, in view of WO '420 or Baumann et al. Although these rejections refer to claims 1-28 and 31, (Applicants assume the Office Action intended these rejections to apply to claims 1-28 and 30, as no claim 31 has been presented.)

Claims 1-28 stand rejected under the judicially created doctrine of obvious-type double patenting as being unpatentable over claims 1-36 of U.S. Patent No. 6,695,935, in view of WO '420 or Baumann et al.

In response to each of these rejections, Applicants have concurrently filed appropriate Terminal Disclaimers. Reconsideration is therefore respectfully requested.


IV. Conclusion

In view of the above, it is respectfully submitted that all objections and rejections are overcome. Thus, a Notice of Allowance is respectfully requested.

Respectfully submitted,

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AMENDMENT


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## ATTACHMENT I

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#### In English:

Alloy at base d'aluminium primarily including/understanding scandium, vanadium, zirconium and cerium characterized in this qu'il contains (mass in %): Scandium 0,15 - 0,60 Vanadium 0,05 - 0,30 Zirconium 0,05 - 0,30 Cerium 0,05 - 0,30 Each additional component chosen among magnesium and/or beryllium, and/or manganese and/or chromium and/or titanium and/or copper and/or molybdenum 0,00-7,20.

#### Translate again - Enter up to 150 words

Alliage à base d'aluminium comprenant essentiellement du scandium, du vanadium, du zirconium et du cérium caractérisé en ce qu'il contient (masse en %): Scandium 0,15 - 0,60 Vanadium 0,05 - 0,30 Zirconium 0,05 - 0,30 Cérium 0,05 - 0,30 Chacun des éléments

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AMENDMENT

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Alliage à base d'aluminium comprenant essentiellement du scandium, du vanadium, du zirconium et du cérium caractérisé en ce qu'il contient (masse en %): Scandium 0,15 - 0,60 Vanadium 0,05 - 0,30 Zirconium 0,05 - 0,30 Cérium 0,05 - 0,30 Chacun des éléments additionnels choisis parmi magnésium et/ou béryllium, et/ou manganèse et/ou chrome et/ou titane et/ou cuivre et/ou molybdène 0,00-7,20.

Translation by Altavista Babelfish

Alloy at base d'aluminium primarily including/understanding scandium, vanadium, zirconium and cerium characterized in this qu'il contains (mass in %): Scandium 0,15 - 0,60 Vanadium 0,05 - 0,30 Zirconium 0,05 - 0,30 Cerium 0,05 - 0,30 Each additional component chosen among magnesium and/or beryllium, and/or manganese and/or chromium and/or titanium and/or copper and/or molybdenum 0,00-7,20.